Biometrika Trust Strategy Review: Executive Summary draft

Membership

Peter Green (Chair), Mark Yarrow (Coordinator), Peter Diggle, Daniel Farewell, Simon Harden, Martin Lamaison, and Sylvia Richardson.

Strategy Group Remit

The Biometrika Trust is facing two key issues:

1. The move to Read and Publish (R&P) deals, whereby most income will come from authors paying to publish rather than, as now, from libraries paying for subscriptions;
2. How to spend any excess assets and future profits.

The Trust's core publishing income is gradually declining (ignoring unpredictable secondary rights) and current projections indicate that publishing will do no better than break even over the next few years. OUP's forecast is that in order to maintain current levels of income in an R&P world, we will need to increase the number of articles we publish annually. This raises the question of what we can do to ensure that Biometrika is secure financially for the foreseeable future.

The move to R&P deals changes the nature of competition between journals. Until now, libraries would typically subscribe to all the leading statistics journals, a fairly comfortable situation. However, in the near future, most income will depend upon authors deciding to pay to publish in Biometrika as opposed to one of our competitors.

Mode of working

The group met nine times between June 2023 and May 2024. Additionally, individual members held meetings with a range of interested parties (such as Editor, Editorial Assistant, and OUP).

The work was split into six modules related to the key issues indicated in the Remit. These modules are as follows:

M1. Author publishing habits
M2. Competitor analysis
M3. Publishing industry/market assessment
M4. Journal growth feasibility
M5. Publishing options
M6. Investing surplus back into the community.

This executive summary was formed based on a much larger working document. Permission to view this working document can be requested to the chair by any member of the Trustee board.

Paper structure

This paper is broken down into the following sections::

1. General observations which refer to the six modules noted above.
2. A separate section highlighting the specific work undertaken relating to (M5).
3. A set of recommendations which indicate the module(s) to which they refer as well as corresponding motivation for each recommendation.
4. An appendix section:
    a) Appendix 1 contains tables referred to as part of the general observation and recommendations sections.
    b) Appendix 2 contains a more detailed pros and cons list relating specifically to (M5) as well as a financial breakdown of the IMS-Mattson projections compared with OUP. .

General observations

1. On (M1 - M5), the group decided that the three main "competitor" (similar) journals in the area of statistical theory and methods (and their publisher) are RSS Series B (OUP), JASA Theory & Methods (Taylor & Francis), and Annals of Statistics (IMS).

2. A survey of authors and editors was conducted. The results of which is found in Table 1 (Appendix 1). We also asked respondents to rank the four journals in question. From the 94 (11%) respondents we found that AoS was ranked first with RSS B second, then a contested third and fourth position with authors favouring JASA and editors favouring Biometrika.

3. A summary of the survey's open text comments can be found in Table 2 (Appendix 1). The full (unprocessed) version is also available here.

4. A table of one-year impact factors, a five year impact factor for 2022, and a breakdown of current Author Publication Charges (APS's) can be seen in Table 3 (Appendix 1). We note the APC for Annals of Statistics is a clear outlier compared with the other three journals. This is analysed further as part of (M5). A journal size breakdown is found in Table 4 (Appendix 1).

5. Related to (M3) and (M5), the publishing industry remains in a state of flux without a clear point of convergence which satisfies all of authors, libraries, publishers or readers.

6. Related to (M4), the importance of statistics in the University sector is growing. Recruitment in statistics is strong globally because student interest in the area is high because of skills necessary for the workplace in the 21st century. Furthermore, it is becoming more common for statisticians to be attached to research grants (as collaborators and consultants) in non-mathematical areas. All of this leads to more researchers in the area, and subsequently more research articles which could be publishable in Biometrika.

7. On (M4), there are three broad reasons for rejecting a paper. These are: (i) not a paper suitable for publication in any journal, (ii) out of scope for the journal Biometrika, and (iii) lack of quality or importance (which can include irreparable correctness). Effectively, an article must be exciting to the readership of the Biometrika and not just represent a marginal step (i.e. using a well known method/technique on a new data set).

8. Related to (M5) which was seen by the strategy group as the largest and most complex module. The IMS model of publishing (which utilises an intermediate company, Mattson, and a production company, VTEX) manages to operate with flexibility and keep their author processing charges (APC's) low compared to the competition, see Table 3 (Appendix 1). A comparison of the financials (forecast 2024) for each of OUP and IMS can be found in Table 6 (Appendix 2). There is no clear financial driver for either option without considering staffing.

9. OUP requires a notice period of 12 months and can be initiated every two years. As we chose not to cease the contract in 2024, the next decision to leave can be taken no later than Dec 2025 which would result in a termination point of Dec 2026. Therefore, the earliest we could move publishers is Jan 2027. (To work with IMS/Mattson, we would need to be signing a contract during the summer in the year before, May/June 2026).

10. On (M6), we must keep in mind (i) what is best for the community, (ii) admin load on both office and board, and (iii) how funds can best support ongoing operations.

Analysis work undertaken to assess the impact on Biometrika of a switch from OUP to an IMS (Mattson) publishing model

[Text to come]

Strategy Group Recommendations

#	Module(s)	Recommendation	Core motivation(s)
1	M1	Make clear on our (and OUP's) website the types of articles which Biometrika would like to publish in. This could be done by way of collections or marketing methods.	Often, the content of a paper will help guide the author to the ideal journal (or the ideal readership).There are operational, ethical, and personal considerations which are included when authors select a journal. However, we should be a top candidate of consideration for all authors publishing in the area of statistical theory and methods. APT created this page recently to act as a growing database of collections they now distribute via CUP bi-montly. A number of different collections can be compiled. Such as: by topic, by geography, or by impact.
2	M1	Increase visibility of the Biometrika editorial board. In particular, highlight subject specialism and geography.	We must make it easy for authors to tie their work into the work which the journal welcomes. This can be done through past issues, and by name recognition of the editorial board. However, inclusion of topics may be helpful too. Perhaps this is a good time to look at gaps in the editorial board as well and assess areas which Biometrika would like to welcome more papers in. Survey quotes: "Perhaps increase the volume of Biometrika to embrace AI/Machine learning papers." and "Spend some money to recruit a more diverse editorial board." The APT editorial board page has high traffic and goes a long way in increasing the visibility of the APT. We also include a historical record of the editorial board. The APT does not have an open call for editors, but all members of the community who enquire are added to a list which is considered every year by the EiC, DE and EE.
3	M1	Review the end-to-end author journey at Biometrika. Pay particular attention to the Biometrika style with a desire to streamline this formatting.	Authors clearly find the formatting of their files onerous and excessive. This must not be a barrier to submitting articles to Biometrika. Furthermore, a review of the article's journal seems reasonable to ensure we are not going overboard, but also that authors of all papers are getting appropriate feedback based on the wait/stage. APT posts author information on their website, and not on the CUP website. More recently, mapping out the article 'journey' for authors to refer to ("Peer review and production process." Section here).
4	M2	Biometrika should be looking to grow its author base and journal	As statistics becomes more like data science, and as more weight is placed on software implementation and less weight on methodology, journals which sit in a space which contains a methodological

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		more generally. We should do this by making it clear what types of papers are welcomed. In particular, explore whether Biometrika shouldwelcome articles which both include methodology as well as software.	foundation and accompanying software could become much more desirable in the industry. This could be an opportunity for a journal to fill this gap to welcome articles which both include methodology as well as software. This would be a radical change in direction for the journal. Here, a recommendation would not be to pivot in this direction, moreover make it clear that these are types of papers which we welcome. This line of thought works to support reproducibility in statistics by including data and software as part of the publication.
5	M2	Biometrika office to monitor (on an ongoing basis) our three 'competitor' journals.	The aim here is to keep an eye on journal operations, important journal metrics, and initiatives taking place at these journals.
6	M3	Editorial Assistant to monitor author interactions related to accessibility and restrictions on publication, and author satisfaction	The Editorial Assistant is the only person who has personal contact with the Biometrika authorship on a daily basis. As such, they are perfectly placed to assess the feel from authors as the open access movement progresses.
7	M3	Office to monitor Read and Publish coverage at Top 250 Universities and analyse the coverage of this list with our (recent) author base by using ScholarOne.	The logic here is in two parts: ● Biometrika has a lot of authors from top Universities, and indeed most articles have multiple authors. As such, we are interested in the proportion of accepted articles which have at least one author at a top University as this would mean the article is covered under a preexisting R&P deal. ● We keep a close eye on the development of OUP's R&P portfolio as it grows to cover our author base (and indeed readership). The aim here is to grow confidence that our authors will be covered by R&P deals as the current method for open access.
8	M4	Review/create documentation to support colleagues working on Biometrika.	The motivation here is to get the editorial board on the same page with regards to standards and what Biometrika does and does not consider, and support everyone. ● There is a Lack of training/guidance/feedback to AE's (this is normal in the industry, but not good practice). We could put together a guide for what papers are welcomed in Biometrika. ● Some guidance for referees could be created. Potentially an optional template or checklist of items to think about in a referee report. (Though we must be careful as there is really no reason

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			other than kindness why referees do this.) ● It may be that we need a manual to support AE's with ScholarOne as well. The focal point here is that we do not want page counts or article publishing rates to be restricting an article publication. Additionally, we do not want to be rejecting articles which have not historically been in scope but could be, as times change, interesting to the Biometrika readership.
9	M4	Review the editorial assistant tasks to allow for growth of the journals. This may require a change to editorial processes to cope.	It has been mentioned above that the style file for Biometrika is tedious and is a drawback to authors submitting files on time. It is clearly also the case that this style file causes additional work for the office (Biometrika Editorial Assistant) and the OUP production team. Therefore an easy to use "Biometrika" style file could be devised with a short accompanying document should be created.
10	M4	Work with the OUP marketing team to devise a strategy to best reach the readership and author, and boost visibility..	The OUP marketing team does know the industry and should be utilised to best market the journal and publicise some of the other recommendations/changes highlighted in this report (such as the board, and the types of articles which we welcome).
11	M5	Pause the question of "should Biometrika move to IMS and cease operations with OUP" until June 2025 (to report in December 2025) at which point a reassessment of the landscape should resume.	The OUP contract requires a notice period which would mean we cannot make a decision to leave the contract until December 2025 (we would leave December 2026), at the latest. Given the landscape of publishing is likely to have changed by then, the decision of whether to move or not doesn't need to be taken just yet.
12	M5	The office to monitor (closely) the publishing environment. In particular the different routes to open access and the different options which are available to achieve this.	The movement towards R&P deals is publisher driven and seemingly disliked by libraries and authors. There are various open science projects gaining traction which put authors first above publishers (such as EMS Subscribe to Open, Diamond Open Access, or other such like).
13	M5	Office to keep track of the IMS operation (and USA attitudes to OA more generally) to assess	During conversations (both written and verbal) with the IMS/Mattson team, members of the strategy group were unconvinced with the level of preparedness for open access. Members were unconvinced that the IMS could cope with R&P type models. As such, if R&P is indeed the future of academic

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		how they adapt over time to the open access movement.	publishing (the group isn't entirely convinced), this would pose a rather large issue for the IMS and as such a problem for journals in their portfolio.
14	M6	Cease the Biometrika fellowship programme and begin the creation of a small grants scheme.	Fellowships are a large cost and benefit few people, whereas a small grant scheme has larger reach. Seeing fund distribution as 'marketing spend' will reinforce the brand and therefore strengthen the journal. Furthermore, the value available can be calibrated year on year (based on operational surplus) to ensure responsible spending. This scheme could include: regional meeting grants (speaker travel, accommodation, and catering),session sponsoring at a larger conference (Biometrika Session), conference travel (PhD student), and others the trustees feel would be supportive to the community.
15	M6	Further work (by the office) to look into whether an LMS Summer School type activity could be created for Statistics.	Host organisations do the organisation work. This could be a way to engage statisticians (very) early on in their careers which are not typically engaged with other funding routes. Other learned societies and/or corporate sponsors may be interested in joining in to reduce cost. The LMS Summer School 2023 cost the LMS £27,000 per year for a two week conference for 45-50 (UK based) (strong) undergraduate students. Mark ran a very successful LMS Summer School in 2023 and as such can support hosts.

Appendix 1: Summary Tables

Category	Question	Very	Somewhat	Not at all
How important are each of the following in forming your view of a journal's reputation?	Impact Factor	26	53	17
	Other rankings (e.g. scimago journal ranking)	14	55	27
	The journals publishing partner(s)	14	36	46
	Views of other researchers	82	12	2
	Whether the journal has published ground-breaking papers in your area	87	9	0
	Who is on the editorial board	53	36	7
How important is each of the following in influencing whether you choose to	Cost of open access	14	40	40
	Ease of use of Latex style	21	41	31
	Editorial board includes an expert in the area of your paper	59	31	6

submit your best work in statistical theory and methods to Biometrika?	Journal reputation	93	3	0
	Journal web-site	9	51	34
	Time from submission to first response	55	38	3
	Time from acceptance to publication	35	51	10
	Quality of reviews of previous submissions	77	19	0

Table 1: Biometrika author/editor survey data.

Question	Comment
Would you wish to make any other comparative comments on the four journals listed above?	Annals of Statistics doesn't necessarily come under "theory and methods". It seems to favour theory over methods.
	JASA and JRSS Series B are less theoretical / more methodological
	The four have a somewhat different focus which is very good. Depending on the relevant focus, the ranking could completely flip. I see these four as complementary. All four journals have equal status which is 'premium'.
	Biometrika has not kept pace with the current movement of AI/Machine learning, which may make the journal soon out of the mainstream journals in the era of data science.
	AoS is a bit too out of touch, while Biometrika may have a better balance between theory, methods, and practical use of statistics.
	Biometrika's style requirements are more cumbersome than the others, which creates a real barrier to submission. People are sometimes scared of its very constraining format (e.g. famous parentheses).
	I found the review process of Biometrika to be the worst. I found the screening process without any comments on the specifics very disturbing as the decision appears to be arbitrary or discriminatory.
The publishing industry is moving towards various open access models (author publication charges, read and publish deals, etc.) The Biometrika Trust is interested in author views on this transition. What are your feelings on this move to open access?	Open access is good, and it can also be free. Obviously the authors cannot pay with their own money. The Institute of Mathematical Statistics appears to have the best options here (i.e. just put the published paper on arxiv and/or website).
	Open access is good, having to pay for it or do lots of extra admin to get it is tedious. If there is a transformative agreement in place this seems to save a lot of time.
	Journals must move towards an open access model. It is indefensible anymore to paywall articles and further

	makes it harder for articles to make an impact. JMLR is a great example
	We (researchers) should be working towards taking control of this (away from the publishing companies, whose motivation is different). The main purpose of a good journal nowadays is quality control, which comes from editors and reviewers whose labour is essentially free. Printed journals are an anachronism by now, and the costs of decent web presentation/distribution/archiving could be met more cheaply through collaborative arrangements between journals/societies than through publishing companies. By such a route, the cost of open access could be drastically reduced. Universal open access ought to be the aspiration.
	The publication cost of open access is too high.
	I don't like author charged because they discourage authors with fewer resources. They also make it difficult to distinguish legitimate journals from predatory journals.
In addition to overseeing the governing of the Biometrika journal, the Biometrika Trust can provide funds to support the statistics community. How do you think this could best be done?	Funds focused on early-career researchers and PhD students in developing countries or disadvantaged researchers.
	Create some Biometrika awards (multiple ideas in feedback document).
	Fellowships are a good idea, if they could be predictable and better advertised.
	Small grant scheme
	Publication fee waivers for authors in need of these funds (for open access reasons).

Table 2: Breakdown of Biometrika author/editor survey. Full list of feedback can be found here.

Journal 1yr IF over time	2018	2019	2020	2021	2022	2023	Journal 5yr IF over time	2022	2023	Cost to publish	Feb 2024
Biometrika	1.64	1.63	2.45	3.03	2.70	TBD	Biometrika	3.2	TBD	Biometrika	£2,595 (link)
Annals of Statistics	2.97	2.78	3.76	4.58	4.22	TBD	Annals of Statistics	5.4	TBD	Annals of Statistics	£950 (link)
JASA Theory and Methods	2.83	3.93	3.85	3.67	3.44	TBD	JASA Theory and Methods	6.2	TBD	JASA Theory and Methods	£2,950 (link)
JRSS Series B	3.54	4.46	3.80	4.54	5.60	TBD	JRSS Series B	5.2	TBD	JRSS Series B	£2,495 (link)

Table 3: Impact factors over the last five years and five year impact factors in the last available window. Finally, costs of publishing open access (Author Publication Charges, APS's) are found in the far right column.

Journal	2018	2019	2020	2021	2022	2023	2024

	Pages	Article	Pages	Article	Pages	Article	Pages	Article	Pages	Article	Pages	Article	Pages	Articles
Annals	3866	127	3608	121	3720	155	3649	151	3676	144	2299	97	TBD	TBD
Biometrika	1000	76	1004	74	1020	73	1003	71	1182	82	1124	69	TBD	TBD
JASA	1845	151	1938	172	2113	178	2100	177	2288	183	2945	240	TBD	TBD
Series B	1116	47	938	36	1398	50	1073	45	2089	51	1709	50	TBD	TBD

Table 4: Page counts and number of articles published over time in each of the four comparable journals.

Appendix 2: (M5) IMS Mattson - OUP Discussion

Group	Subgroup	Item
Financial	Pros	Income. Having adjusted for currency and differing base years (based on 2022 numbers, the latest we have from OUP), income from subscriptions and open access (OA): OUP, £166k; IMS, £179k.
		Could move to break even author pays OA model (not possible with current OUP contract).
	Cons	Expenditure. Having adjusted for currency and differing base years, OUP's costs (£27K based on 2022 numbers, the latest we have from OUP) are less than half IMS's (£55K) while OUP's share (£46K) is more than double IMS's (£19K). Overall: OUP, £73k; IMS, £74k.
		IMS income numbers must be seen as highly speculative. They assume their list of subscribers will pay for Biometrika, in effect, again (their OUP fees will hardly change).
		Risk on depending upon a two person organisation.
Publishing	Biggest changes	Change in editorial management system from ScholarOne to EJMS.
		Handling of the day-to-day journal operations may shift from Biometrika (Ros/Paul) to Mattson. Other Mattson/IMS models do exist, however may be less efficient if moving to a Mattson/IMS model.
		Articles move from hosting on the Oxford website to Project Euclid.
		Marketing of the journal would change from "small part of a large, varied consortia" to "larger part of smaller focussed bundle". It remains unclear which is better in practice, arguments are clear for both sides.
	Pros	We would be aligned more closely with a small, impactful set of IMS journals. This may be favourable in terms of 'public image'.
		There have been issues with production recently. Perhaps VTex might do a better job. However, recent discussions within the salary review group indicate problems stem from the Biometrika style file.
		Online article proof reviewing uses a successful web-based system at VTex so authors can edit source files directly. This is an update on our current (though functional) pdf markup based method.
	Cons	Initial setup time incurred when switching between systems. In terms of the physical move and with internal system knowledge. (Benefit to using ScholarOne is Mark uses it for APT and can backup if needed.)
		Publishing on project euclid removes the visual identity of the journal which has been well established at OUP for many years (readers and authors know where to look).
		The US based IMS/Mattson group seems further behind and ill-prepared for the OA movement compared with OUP. It is unclear how their operation could be maintained in the OA future. Read & Publish deals (and APC's as a second option), which OUP are pursuing appear more viable.
		Workload is moved from Biometrika employees onto contractors. This is a con due to oversight.

Table 5: A pros, cons, and changes summary of the IMS (Mattson) model applied to Biometrika.

Income Statement	OUP 2025	IMS 2025	IMS 2026
REVENUE			
Subscriptions, Institutional	£117,979	£169,558	£178,309
Subscriptions, Special Arrangements via Project Euclid		£5,952	£6,259
Voluntary Publication Fees		£4,780	£5,736
Archive, open access, second rights, pay per view	£53,189		
TOTAL REVENUE	£171,168	£180,290	£190,304
EXPENSES			
EJMS/ScholarOne	£13,259	£4,740	£4,740
Copyediting, Project Management, Typesetting	£17,577	£35,652	£37,435
Author Alert	£0	£176	£185
Posting on Project Euclid	£0	£1,344	£1,411
Editorial Assistance	£0	£2,400	£2,400
Electronic Access - Project Euclid	£0	£3,600	£4,000
Subscription Management	£0	£12,725	£12,725
Marketing and distribution	£518	£0	£0
Credit Card Fees for Publication Fees	£0	£191	£229
TOTAL EXPENSES	£35,945	£55,897	£58,156
REVENUE OVER EXPENSES	£135,223	£124,392	£132,148
Percentage to IMS/OUP	£31,354	£18,659	£19,822
INCOME PER CONTRACT	£103,869	£105,733	£112,326

Table 6: Financial comparison between OUP (2025) and IMS (2025 and 2026)